My Nutrition

Salt replacement therapy for children and adolescents with Cystic Fibrosis

Why do people with Cystic Fibrosis need extra salt?

All people with cystic fibrosis (CF) lose large amounts of sodium and chloride (the two compounds that make up salt) in their sweat, especially with exercise, hot weather, fevers and infections. People with CF lose 3-4 times more salt through their sweat than those without CF.

The CF sweat gland is unable to absorb salt back into the blood. This leaves large amounts of salt in their sweat. Because the level of salt in the blood does not rise, the body has no recognition of thirst. This leads to a higher risk of dehydration. To prevent dehydration, people with CF need to replace both salt and fluid.

Signs and symptoms of salt depletion

- Fatigue, irritability, headaches
- Poor concentration
- Salt crystals on the skin
- Nausea, vomiting, decreased appetite
- Muscle cramps
- Hyponatraemia (low blood sodium)
- Thicker, harder to expectorate sputum
- Thicker secretions in the bowel leading to constipation

Recommended doses of sodium

Salt requirements for CF vary based on symptoms, dietary intake, living climate and activity level. Approximate daily requirements are:

- Infants: ¼ tsp / day, increasing up to 1 tsp by 12 months
- Children: ~2 tsp / day
- Adolescents: ~3 tsp / day

This is a consensus document from Dietitian/ Nutritionists from the Nutrition Education Materials Online, "NEMO", team.
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Queensland Government

Assume that a regular well-balanced diet already contains the equivalent of 1 teaspoon of salt a day.

Remember: extra salt and fluid is required all year round in Queensland

Even more salt may be required!

- In infancy as requirements are increased during rapid growth
- Before additional physical activity
- When holidaying/living in hot climates
- During periods of illness due to reduced intake and increased losses
- When dietary intake is decreased and/or replaced by oral supplements or tube feeds with a low sodium content

Getting extra salt in the diet

The easiest way to consume extra salt is by adding salt and eating foods naturally high in salt.

Try to include the following foods daily:

- Vegemite, butter, margarine
- Cheese
- Pretzels, salted biscuits, salted nuts
- Tomato, barbeque and soy sauce
- Gravy and dressings
- Pizza
- Olives and pickles
- Canned fish in brine
- Frozen or tinned meals
- Packet pasta, 2 minute noodles

Salt supplements

Taking salt tablets or salt filled gel caps help prevent dehydration. These supplements create thirst to encourage fluid intake.

Sodium content of common supplements:

- ~250mg in one salt tablet
- ~500mg in one salt filled gel cap

- ~2300mg in just 1 tsp of table salt
- ¼ tsp in one salt sachet

Sport drinks have less sodium (between 150-240 mg per 600ml) than other electrolyte drinks. Increase the salt content of these drinks by adding ¼ tsp of salt, or make your own sports drinks (¼ – ½ tsp salt in 1L cordial). Sports drinks are high in sugar so should only be consumed on days of increased sport activity and remembering good dental hygiene is important.

Tips to get more salt

- Travel with extra salt and a water bottle
- Pack a salt shaker in the lunch box
- Use plenty of sauces and gravies
- Choose the 'salted' varieties of foods
- Try freezing your electrolyte drink into ice blocks
- Add salt generously to savoury foods

Salt and fluid together are important

Water is also lost through sweat. The body cannot store water and the amount lost every 24 hours must be replaced. On average, children should aim for 1200-1500ml/day. This will increase with exercise, hot weather and humidity. Nutritious fluids like milk also help prevent dehydration and help provide the extra calories required.

Things I can do to improve my salt intake:

1. _____
   _____
2. _____
   _____

For further information contact your Dietitian

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